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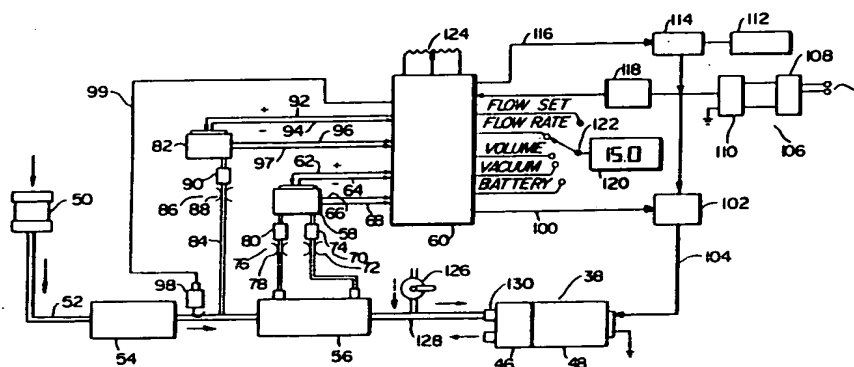
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A1

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(43) Int. Publication Date: 13 December 1990 (13.12.90)

(54) Title: CONTROLLED SAMPLER

**(57) Abstract**

The present invention is concerned with a controlled sampler device which draws a gas through a contaminant collection device (50). The controlled sampler comprises an inlet (52) to the sampler/ a pump (38) adapted to draw a gas through the inlet; a reference element (10) that provides a reference signal (12); a feedback element (40) with an output (16); a differentiator (14) to compare the reference signal with the feedback signal to provide an error signal (20) that is linearly related to selected and measured values. Also included is an integrator (22) with an input connected to the output of the differentiator and to a summer (28); and proportional error amplifier (26) between the differentiator and the summer to provide a signal (32) to the summer which is proportional to the error signal, which is passed to a driver (36) which regulates the speed of the pump to change the flow rate to reduce the error signal to a null.

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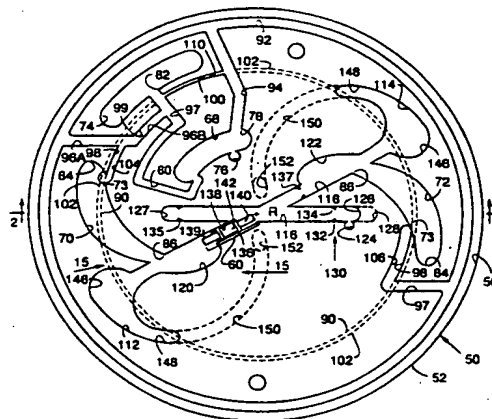
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A2

(11) Int. Publication Number: WO 90/15321

(43) Int. Publication Date: 13 December 1990 (13.12.90)

(54) Title: ROTOR AND METHOD FOR AUTOMATICALLY PROCESSING LIQUIDS FOR LABORATORY AND BIOANALYSIS PURPOSES

**(57) Abstract**

A rotor assembly (50) for performing a relatively large number of processing steps upon a sample, such as a whole blood sample, and a diluent, such as water, includes a rotor body (52) for rotation about an axis (R) and including a network of chambers within which various processing steps are performed upon the sample and diluent; and passageways through which the sample and diluent are transferred. A transfer mechanism (60) is movable through the rotor body by the influence of a magnetic field generated adjacent the transfer mechanism and movable along the rotor body, and the assembly utilizes centrifugal force, a transfer of momentum and capillary action to perform any of a number of processing steps such as separation, aliquotting, transference, washing, reagent addition and mixing of the sample and diluent within the rotor body. The rotor body is particularly suitable for automatic immunoassay analyses.